**BIRD**
**& SON, inc.**
BIRD PRODUCTS
*Established* ® 1795

# THE *Approved* VAPOR BARRIER PAPER

**FOR USE WITH ALL TYPES OF INSULATION**

1949

## *For Use With Insulation*

## For Positive Condensation Control in Wall and Ceiling Construction Specify Bird Neponset Black Vapor Barrier

One of the greatest enemies of efficient insulation, as well as a contributing cause of exterior paint blistering, structural rot and damage to interior finish is condensation. Modern building methods rightly insist on air-tight, insulated, leak-free construction as a preventive of heat loss. However, the elimination of air leaks in sidewalls and ceilings has also eliminated the openings through which excess water vapor, found in most heated buildings, could pass harmlessly to the outside. This excess vapor exerts a great force to get to the colder, low pressure areas outside and literally pushes itself through the wall. As it reaches the lower dewpoint temperature which during cold weather is usually found between the outside and inside wall, the vapor condenses into water, which if not prevented, will cause great damage. Fortunately, there is a proven way to prevent this moisture from entering sidewalls and ceilings, and condensing. It is by specifying and using an approved Vapor Barrier such as Bird Neponset Black Vapor Barrier on the inside or warm side of the wall. This Vapor Barrier has been widely and independently tested; among the most recent being at the University of Minnesota laboratories by Professor Rowley, a recognized authority on this subject. Those tests revealed that Bird Neponset Black Vapor Barrier far exceeded the standards set up by Professor Rowley for an efficient vapor barrier.

Its use on the warm side of the insulation, i.e., nearest the inside or warm surfaces, automatically prevents condensation in the between-stud areas resulting from the above described causes. Bird Neponset Black Vapor Barrier prevents this condensation because it screens out the moisture as the warm moisture-bearing air moves from the warm inside area to the colder outside area. For positive protection, specify and use Bird Neponset Black, the approved VAPOR BARRIER.

## *Why* Bird Neponset Black Is the Right Vapor Barrier to Prevent Condensation in Buildings You Construct

### It's the Right Type

Authorities agree that one of the best methods of combating condensation is the use of an asphalt saturated and glossy coated paper on the warm side of the wall. (See U. S. Dept. of Agriculture Forest Products Laboratory Report — Condensation Problems in Modern Building.) Bird Neponset Black is asphalt saturated and coated with glossy waterproof asphalt in the Bird plant and under our own Controlled Production Process.

### It Meets Every Test

In test after test, Bird Neponset Black has received the stamp of approval as an efficient Vapor Barrier. Most recent of these is that conducted in 1945 by Professor Rowley in the laboratories of the University of Minnesota. It was found to greatly surpass the requirements set up by Professor Rowley for a Vapor Barrier.

### It Has These Plus Values

In addition to its function as a Vapor Barrier, Bird Neponset Black performs the double function of sealing cracks, eliminating drafts through sidewalls, and loss of heat by convection.

### Specifications

Width of Roll — 36 in.

Available in 500 sq. ft. rolls — approximate weight per roll, 50 lbs.

Asphalt saturated and coated both sides with a glossy surface asphalt coating.

Meets Federal Specification UU-P-536 Grade B.

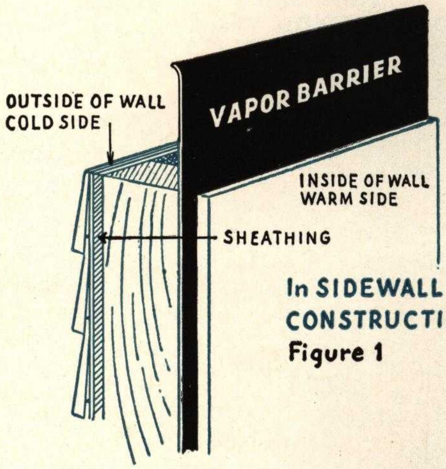
## *Where* to Install Neponset Black Vapor Barrier in Residential Construction

The Vapor Barrier used must have a lower vapor transfer rate than the wall on the opposite or cold side (Fig. 1). This will allow any moisture which may pass around the Vapor Barrier an opportunity to escape through the cold wall before it condenses.

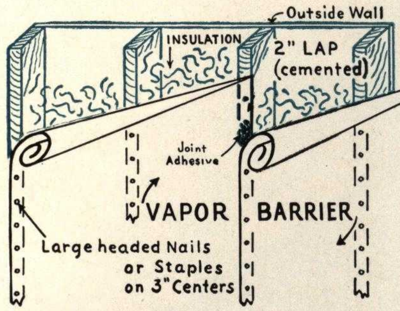
Bird Neponset Black Vapor Barrier should be applied to the studs (Fig. 2) with at least a 2 inch lap cemented with Bird Quick-Set Lap Cement and fastened with large headed nails or staples. The nails should be ¾ inch Galvanized Roofing Nails, or if staples are used, they should be Viking Gypsum Staples (manufactured by W. W. Cross & Co.) at least 9/16 inches in length.

Care should be taken to make absolutely certain that all possible air leaks are sealed. All corners should be lapped the usual 2 inches, and cemented. In attics where insulation and a Vapor Barrier are used, it is necessary to allow for air circulation above the insulation by installing louvers at both ends of the building. This gives any moisture-laden air which has escaped around the Vapor Barrier or through damaged areas, an opportunity to escape before it condenses on the cold roof boards.

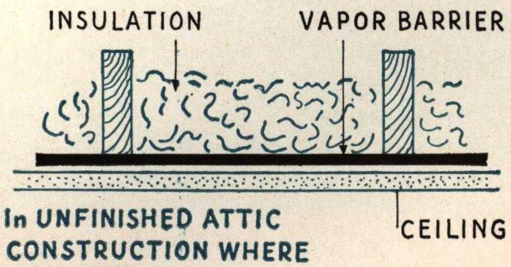
## *Where* to Install Vapor Barrier in Residential Construction



**In SIDEWALL CONSTRUCTION**
**Figure 1**

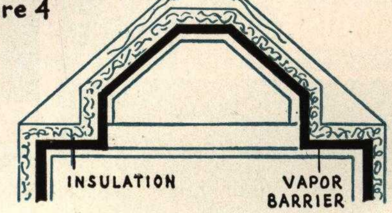


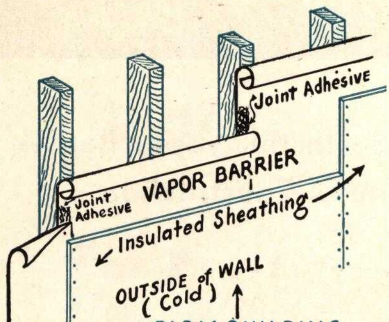
**APPLICATION to STUDS** **Figure 2**



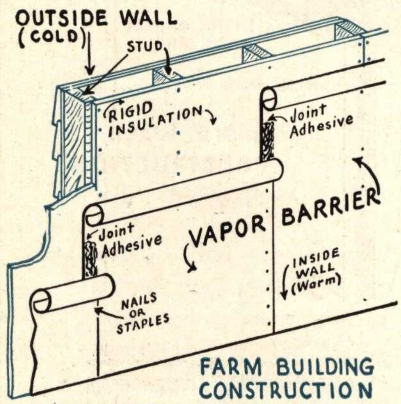
**In UNFINISHED ATTIC CONSTRUCTION WHERE CEILINGS ARE INSULATED** **Figure 3**

**In FINISHED ATTIC CONSTRUCTION**
**Figure 4**

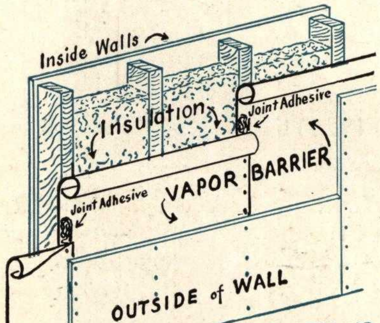




FARM BUILDING CONSTRUCTION where INSULATION IS APPLIED ON OUTSIDE OF STUDS.
Figure 5



FARM BUILDING CONSTRUCTION WHERE INSULATION IS APPLIED ON INSIDE OF STUDS
Figure 6



COLD STORAGE CONSTRUCTION
Figure 7

## *Where* to Install *Bird Neponset Black Vapor Barrier* in Farm Buildings

When farm buildings are to be built using insulated sheathing board, Bird Neponset Black Vapor Barrier should be applied to the outside of the studs in the usual manner; that is, lapped with at least a 2 inch lap, cemented, and fastened with either large headed nails or staples. The building board or sheathing is then applied over the vapor seal. When a white interior is desired, the Neponset Black Vapor Barrier may be whitewashed in the usual manner with any good whitewash. If non-insulating inside finish is to be used, the Bird Neponset Black Vapor Barrier should be applied to the inside of the studs, and the inside finish applied directly over it.

If the interior walls of an already existing farm building are to be insulated with rigid insulation, the following procedure should be followed. After the insulation board is installed, apply Bird Neponset Black Vapor Barrier to the inside (warm) surface. (See Fig. 6.) This can best be done by applying Bird Neponset Black Vapor Barrier vertically to the wall with a 2 inch cemented lap, fastening the Neponset Black to the insulating board with Viking Gypsum Staples (manufactured by W. W. Cross & Co.), placed 3 inches on centers and in vertical rows approximately 16 inches apart. If in danger of destruction by pecking of hens, or abrasion from cattle, the Vapor Barrier may be covered with a hard board wainscot.

## *Where* to Install *Bird Neponset Black Vapor Barrier* with Cold Storage Insulation

A good Vapor Barrier is absolutely essential when insulating a cold storage room. This should be applied on the warm side which in this case, may be the outside wall. Bird Neponset Black Vapor Barrier should be lapped 4 inches, cemented and fastened with nails or staples. (Fig. 7.)

In special cases of high interior humidity, or in very severe cases where the temperature inside the cold rooms is below 0°F., special vapor barrier construction is necessary. For such special problems write manufacturer.

In fruit and vegetable storage bins without mechanical refrigeration, Bird Neponset Black Vapor Barrier should be applied on the warm side of the insulation. In cases of this type, the warm side would be that side which is warmest the greater part of the time the building is being used. The Vapor Barrier should be lapped 4 inches, cemented and fastened with nails or staples. In cases where the walls are below grade, Bird Neponset Black Vapor Barrier should be applied to both sides of the wall with two plies on the side which is in contact with the earth.

NOTE: In all types of installations care should be taken to vapor-seal the space between the studs at the bottom, to prevent moisture from below bypassing the vapor barrier in the wall.

**FOR HOMES**

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